

# Buffalo Navy

MARINE ENGINE

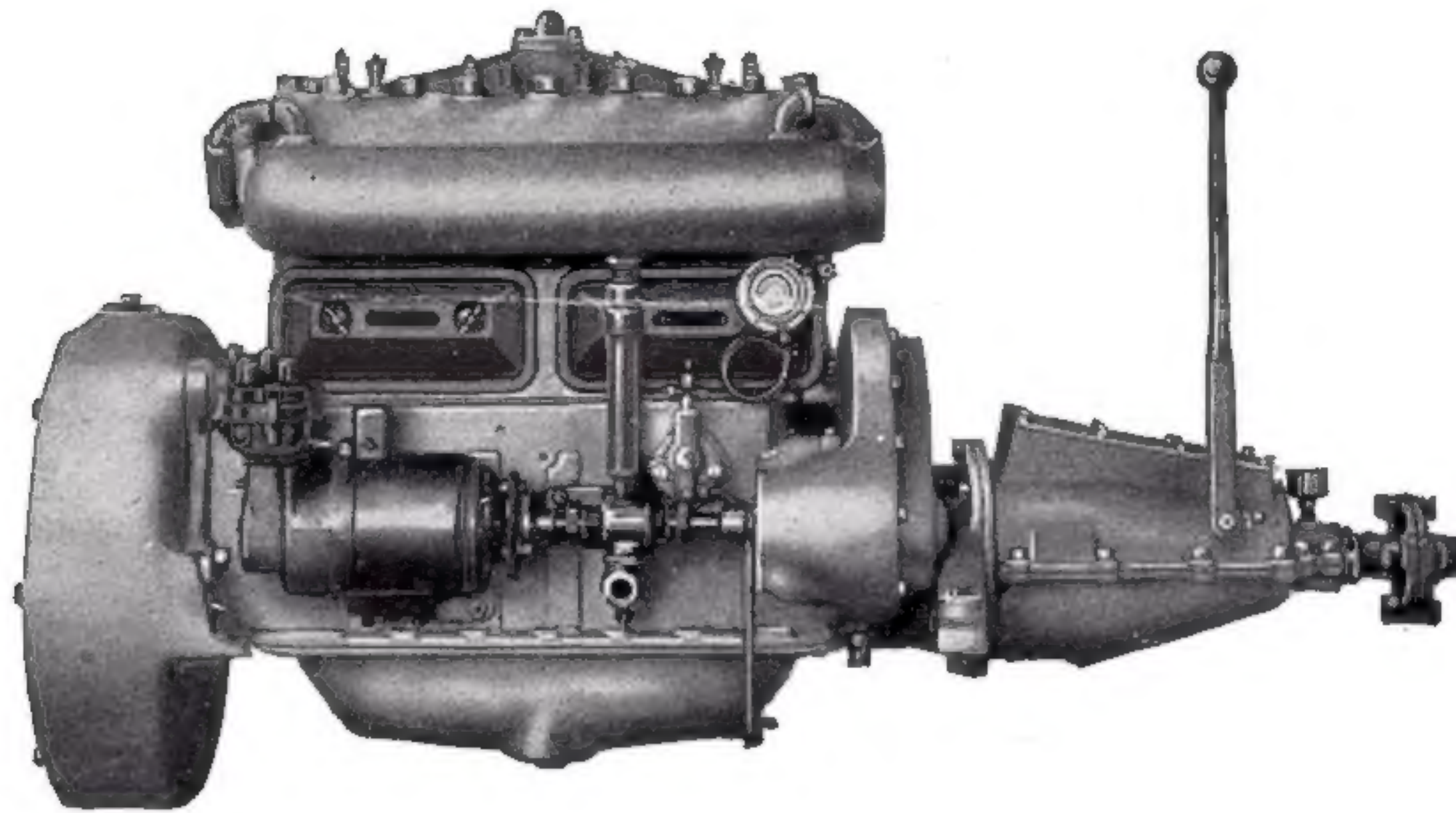
**30** H.P. *Four Cylinder*  
*3½ in. Bore*  
*5 in. Stroke*

*"The Engine of Constant Service"*





## A DEPENDABLE MARINE ENGINE



When the lives of daring men are depending on the performance of a marine engine, the U. S. Navy adopted the "BUFFALO-NAVY" model to power life boats of 26' length and under; what finer tribute could be paid any engine? Results obtained by users of this marine engine throughout the world in service of every kind of boat, runabout, small cruiser, fishing boats, etc., and the enviable reputation the engine has built for itself conclusively proves that it is well engineered and built of the best. Its quality entitles it to the consideration of the most critical and its performance record will stand the most thorough investigation. Never was a motor like this offered at the price.

*"The Engine of Constant Service"*





## SPECIFICATIONS

**CRANKSHAFT:** Drop forged steel. Three main bearings  $2\frac{1}{4}$ " diameter. Connecting rod bearings  $1\frac{7}{8}$ " diameter,  $2\frac{1}{8}$ " long. Forward end of shaft has integral flange to which flywheel is attached with fitted bolts.

**CYLINDERS:** Cast enbloc, of close grain grey iron. A deep, rigid casting of bridge construction. Large hand holes arranged for inspection.

**CYLINDER HEAD:** Cylinder head is detachable, made of close grain grey iron attached to the cylinder block with studs.

**CONNECTING RODS:** Drop forged steel, "I" beam section, heat treated, upper end equipped with bronze bushings. Wrist pin  $1\frac{3}{32}$ " in diameter, hardened and ground.

**FLYWHEEL:** Grey iron, statically and dynamically balanced, fitted with gear for electric starting motor.

**CAMSHAFT:** Drop forging, heat treated, mounted in three bronze bearings. Front  $2\frac{19}{32}$ " diameter; middle  $2\frac{9}{32}$ " diameter; rear  $1\frac{1}{2}$ " diameter.

**BEARINGS:** Main and connecting rod bearings, bronze backed, babbitt lined.

**MANIFOLDS:** Intake and exhaust manifolds are of close grain grey iron, both water jacketed. The inlet manifold is designed for equal distribution of fuel. Hot water from the cylinder head is circulated around inlet manifold to apply heat to the ingoing charge.

**PISTONS:** Of cast iron, fitted with three  $\frac{3}{16}$ " rings above the wrist pin.

**LUBRICATION:** Circulatory splash system. Oil is pumped from the base direct to main bearings. Connecting rods are fitted with dippers which collect oil from troughs arranged under them, from which the oil

is forced into the connecting rod bearings and splashed onto the cylinder walls.

**COOLING SYSTEM:** Cooling water is circulated by a bronze gear pump, water passing first to the exhaust manifold; from the exhaust manifold to the base of the cylinder. With this system the cooling water is heated before reaching the cylinder walls, thereby eliminating distortion. The pump is of ample capacity to keep the engine at proper temperature under all conditions.

**CARBURETOR:** Selected for its economy, fitted with screens to prevent flame from back-fire passing through it. The gases from the crankcase are drawn directly into the carburetor, preventing them from escaping into the boat.

**IGNITION:** System includes six volt battery distributor with high duty coil.

**ELECTRIC STARTER:** Regular equipment is a six volt system, including electric starting motor which is ruggedly constructed, starting the engine through Bendix drive. The generator is of the six volt type, equipped with cut-out release which automatically disconnects the battery so that it will not discharge back to the generator when the engine is stopped.

**CLUTCH and REVERSE GEAR:** Clutch and reverse gear are of the planetary type, quiet running and dependable, well balanced. The disc clutches, located one on each end of the case, takes the driving strains off the gear and all back-lash is taken up by the friction drive. This is exceedingly important for long life and smooth action. It ensures against undue wear, distortion and breaking of gear teeth. The bronze and steel discs are made heavy to avoid warping and to give a more reliable neutral. Large thrust bearings are placed at the rear end, taking the thrust in both directions. The entire gear is run in a bath of oil contained in the housing.





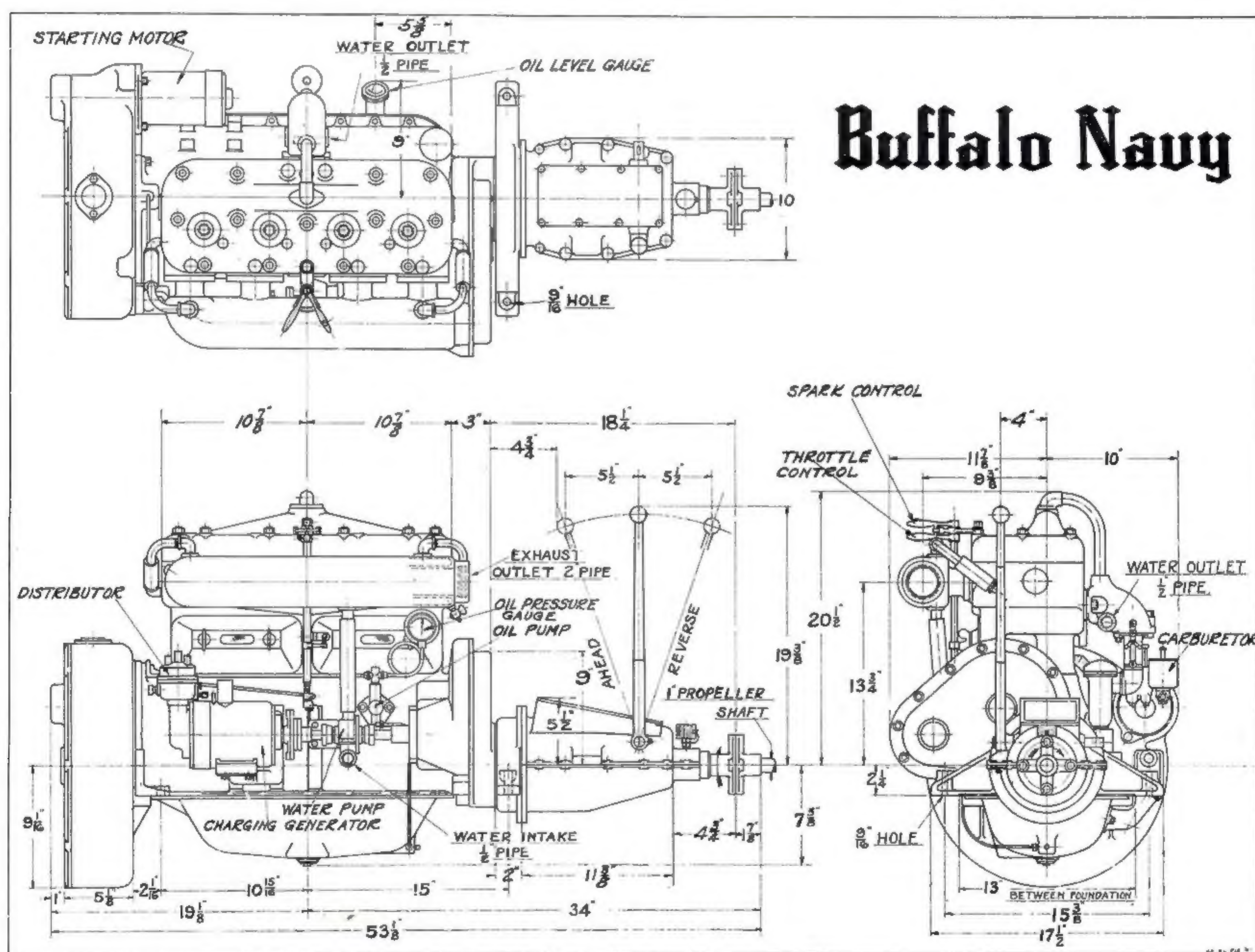
## General Specifications:

Cylinders—four  
Bore— $3\frac{1}{2}$ "  
Stroke—5"  
Piston displacement—190.42 cu. in.

12 H.P. at 600 R.P.M.  
25 H.P. at 1200 R.P.M.  
30 H.P. at 1600 R.P.M.

WEIGHT: net—780 lbs.  
Boxed for domestic shipment—1000 lbs.  
Boxed for export shipment—1050 lbs.

DIMENSIONS:  
Export shipment, 53"x36"x29"



## Buffalo Gasolene Motor Company

1280-1290 Niagara Street

Buffalo, N. Y.

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